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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/552,453

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Kazumi Nagasawa

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EXAMINER

DAGER, JONATHAN M

ART UNIT

PAPER NUMBER

3663

NOTIFICATION DATE

DELIVERY MODE

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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/552,453	Applicant(s) NAGASAWA ET AL.	
	Examiner JONATHAN M. DAGER	Art Unit 3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 2 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments (see pages 6-8 filed 23 March 2011) with respect to the rejection of claim 1 under 35 U.S.C. 103(a) have been fully considered and are persuasive due to amendments. Therefore, the rejection of claim 1 under 35 U.S.C. 103(a) has been withdrawn.

Subsequently, the prior art rejections of all claims dependent therefrom are withdrawn.

However, upon further consideration, new grounds of rejection are warranted (see below).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2a. Claims 1, 3-6, and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Consiglieri (US 5,592,485), and further in view of Kakkawa (US 2002/0003781).

Regarding claim 1, Consiglieri discloses a front electronic equipment system for use in vehicles (Fig. 1), wherein the system comprises a plurality of kinds of load electrical parts (electrical devices in a vehicle, see abstract, Fig. 1 index 27) located in the front of the vehicle.

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Consiglieri discloses an equivalent front ECU (master unit 5) configured to receive a control signal (from switch devices 32 and/or 34) for controlling the drive of load electrical parts through a main bus line (9) (also see Consiglieri at column 5 lines 10-15).

Consiglieri discloses an equivalent drive control unit (slave unit 27) connected to the front ECU via sub-bus line (e.g. 7 and 7') and wire harness (Consiglieri at column 2 lines 38-57), configured to receive commands from the front ECU and drive the front electrical load parts (e.g. driver's rear view window mounted on the door 15). It is further noted that many of the drive control units (slave units 27), as illustrated, are in the same assembly as the load electrical part (e.g. external mirror motor and slave unit 27), and thus serve as an electrical connector on which the load electrical part is mounted.

While Consiglieri structurally discloses that which is claimed, it is not explicitly disclosed wherein the data is modified in the front electrical control unit (slave unit 27), and does not explicitly disclose that the protocol has been converted to a secondary protocol, the first and second protocols varying in communication speed.

Kikkawa teaches a multiplex vehicular communication invention (title), which contains a data relay unit which has a plurality of send/receive (SR) sections. Communication lines are connected to the respective SR sections, and nodes are connected to the communication lines. The data relay unit further includes a destination table and header tables. In the data relay unit, a data frame sent from a node is received by one of the SR sections, and the SR sections which ought to send the data frame are identified by referring to the destination table. A header according to the appropriate communication protocol is formed by referring to one of the header tables. Further the data frame including the formed header is formed and sent to the destination

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node by the identified SR sections. When nodes are added or eliminated, this system can be reconfigured only by modifying or replacing the destination table and the header tables (abstract).

Thus, it is taught a control unit configured to convert a communication protocol of a first bus to a communication protocol of a second bus when necessary.

Kikkawa teaches that in all the nodes in the multiplex communication system are appropriately divided into the networks according to the required communication speed and the amount of data to be sent. The communication protocol used in each network 11-14 is also determined according to the required communication speed and the amount of data to be sent (para 0027).

Thus, each sub-bus in the invention of Kikkawa is distinct from the other in the protocol used, the protocol (CAN, BEAN, IEBUS, ISO9141, see fig.1) being chosen with respect to communication speed.

Consiglieri has disclosed a base invention which is capable of all functions of the claimed embodiments, including a vehicle infrastructure in which data is modified so that communication between vehicle components is enabled. Where Consiglieri is deficient, with respect to claim 1 is that Consiglieri does not explicitly disclose wherein the protocol is changed with respect to transmission speed. Kikkawa cures the deficiency in a similar vehicle communication architecture..

Thus, since both inventions both disclose/teach similar elements and usage, it would have been obvious to one of ordinary skill in the art at the time of the invention to simply substitute one apparatus into the other, or at least combine their respective elements, to achieve no more

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than the predictable result of a control unit configured for protocol conversion. Doing so would provide for communication between vehicle ECUs with respect to message priority and communication speed.

Combining prior art elements according to known methods to yield predictable results is a rationale to support a conclusion of obviousness. See MPEP 2143(A).

Simple substitution of one known element for another to obtain predictable results will support a conclusion of obviousness. See MPEP 2143 (B).

Regarding claims 3 and 5, Consiglieri discloses the plurality of load electrical parts (slave units 27 and their associated electrical units) which can be considered auxiliary with respect to the claimed embodiments.

Intended Use

It is noted that claims 3-12 contain multiple statements of intended use or field of use (e.g. “for driving”, “wherein...converts”, etc.). These statements of intended/field of use or wherein clauses are essentially method limitations. While these claims have been given their full patentable weight, these claims, as well as other statements of intended use, do not serve to patentably distinguish the claimed structure over that of the reference.

See MPEP § 2114 which states:

A claim containing a “recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from the prior art apparatus” if the prior art apparatus teaches all the structural limitations of the claim.

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Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than functions.

Apparatus claims cover what a device is not what a device does.

As set forth in MPEP § 2115, a recitation in a claim to the material or article worked upon does not serve to limit an apparatus claim.

Additionally, the terms "configured to" or "arranged to" are considered to be structurally modified statements and are not intended use. Claims amended to include the above listed language may patentably distinguish themselves structurally.

Regarding claims 4 and 6, Consiglieri discloses a dual system (left and right side of the car) comprising a plurality of auxiliary units (slave units 27) configured to be driven and coupled as claimed.

Regarding claim 11, Consiglieri discloses wherein the front ECU is connected to the drive ECU via power source line (first conductor for a positive electrical supply at a power level; see Fig. 1 index 10).

Regarding claim 12, the combination teaches a CAN protocol for the priority, high speed protocol (see fig. 1, 12), and other subsequent protocols which are of lesser communication speed (see Kikkawa at para 0064).

Even though it is not explicitly taught or disclosed in either invention, it would be obvious to one of ordinary skill at the time of the invention the vehicle communication system of Kikkawa could be configured to support a vehicle bus protocol such as the Local Interconnect

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network given the above citations, malleability of the invention, and the LIN is based on the ISO 9141 standard, as taught by Kikkawa.

Regarding claim 13, one of ordinary skill would recognize that the connector and pin arrangement as claimed would be an obvious design choice to the invention of Consiglieri.

2b. Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Consiglieri and Kikkawa, as applied to claims 3-6 above, and further in view of Oniishi (US 5,859,845).

Regarding claims 7-10, the combination as cited above does not explicitly teach controlling the specific electrical output components as claimed.

Oniishi teaches a vehicle communication architecture suitable for use in controlling electric power fed to lamps and motors aboard a vehicle (column 1 lines 5-7). Further, Oniishi discloses that the load drive unit A 20 is also connected to a first group of detecting switches 22.sub.1 -22.sub.n and sensors 23.sub.1 -23.sub.n mounted on the body of the motorbus. Signals output from these switches and sensors are input to the control section 20b by way of an input interface (I/F) 20f. Battery relays, lighting switches, and switches for detecting the operation of wipers, micro inversions, and the opening of a door can be mentioned as the detecting switches 22.sub.1 -22.sub.n. The control section 20b uses the previously described input signals when controlling the loads 21.sub.1 -21.sub.n. Further, the control section 20b converts the input signals into data and sends the thus converted data to the other units, i.e., the SW unit 10 and the

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load drive unit B 30, by way of the communications interface I/F 20a and the multiplex transmission line 40 (column 7 lines 38-57).

Thus, the invention of Oniishi is clearly capable of operating such load electrical parts as a clearance lamp and a cornering lamp. Further, although it is not explicitly taught or disclosed in the combined invention, it would be apparent to one of ordinary skill in the art at the time of the invention that the multiplexing systems Oniishi, Kakkawa, and Consiglieri, alone or in combination, would clearly render this embodiment obvious since both inventions are drawn toward sensing multiple vehicle control parameters, both programmed or manually activated via switches, and controlling the load distributed to the load electrical parts in response.

Thus, since all systems are drawn towards similar components and their uses, it would be obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Oniishi onto the combination of Consiglieri and Kakkawa; doing so would provide for a more adaptable vehicle control and sensing architecture.

Combining prior art elements according to known methods to yield predictable results is a rationale to support a conclusion of obviousness. See MPEP 2143(A).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JONATHAN M. DAGER whose telephone number is (571)270-1332. The examiner can normally be reached on 0830-1800 (M-F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/JONATHAN M DAGER/

Examiner, Art Unit 3663

17 June 2011

/JACK KEITH/

Supervisory Patent Examiner, Art Unit 3663